Celanese
The chemistry inside innovation™

CELANEX® 2302 GV1/45 - PBT

Description

PBT + PET, 45% glass filled, high gloss
Celanex 2302 GV1/45 is a 45% glass fiber reinforced Polybutylene terephthalate polymer blend with PET, which provides excellent stiffness and good surface appearance.

Physical properties	Value	Unit	Test Standard
Density	**105**	lb/ft³	ISO 1183
Melt volume rate, MVR	**7**	cm³/10min	ISO 1133
MVR temperature	**509**	°F	ISO 1133
MVR load	**4.76**	lb	ISO 1133
Molding shrinkage, parallel (flow)	**0.1 - 0.2**	%	ISO 294-4, 2577
Molding shrinkage, transverse normal	**0.3 - 0.7**	%	ISO 294-4, 2577
Water absorption, 23°C-sat	**0.4**	%	Sim. to ISO 62
Humidity absorption, 23°C/50%RH	**0.15**	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**2.32E6**	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	**24700**	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	**1.8**	%	ISO 527-1, -2
Charpy notched impact strength, 23°C	**4.99**	ft-lb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	**4.99**	ft-lb/in²	ISO 179/1eA
Ball indentation hardness, 30s	**34800**	psi	ISO 2039-1

Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	**401**	°F	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	**0.0833**	E-4/°F	ISO 11359-2
Flammability at thickness h	**HB**	class	UL 94
thickness tested (h)	**0.0315**	in	UL 94

Typical injection moulding processing conditions

Pre Drying	Value	Unit
Necessary low maximum residual moisture content	**0.02**	%
Drying time	**3 - 4**	h
Drying temperature	**248 - 284**	°F

Temperature	Value	Unit
Hopper temperature	**68 - 122**	°F
Feeding zone temperature	**446 - 464**	°F
Zone1 temperature	**482 - 500**	°F
Zone2 temperature	**482 - 500**	°F
Zone3 temperature	**500 - 518**	°F
Zone4 temperature	**500 - 518**	°F
Nozzle temperature	**509 - 527**	°F
Melt temperature	**509 - 527**	°F
Mold temperature	**194 - 248**	°F
Hot runner temperature	**509 - 527**	°F

Pressure	Value	Unit
Back pressure max.	**30**	bar

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Speed	Value
Injection speed	**high**

Characteristics

Special Characteristics	Auto spec approved, Heat resistant, High gloss
Product Categories	Glass reinforced, Polymer blend
Processing	Injection molding
Delivery Form	Pellets
Additives	Release agent